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GOVPUBBROWNFIELD REDEVELOPMENT FOR HOUSING:  
LITERATURE REVIEW AND ANALYSIS

## INTRODUCTION

This research study reviews, analyses and updates the issues and barriers related to brownfield redevelopment for housing in Canada. The study is intended to update the research conducted for Canada Mortgage and Housing Corporation (CMHC) and the National Round Table on the Environment and Economy (NRTEE) in 1996 and 1997.

The study draws on the results of a literature review and a questionnaire administered to a dozen brownfield experts across Canada to examine the progress achieved, emerging issues, and suggested improvements to overcome challenges that remain.

The research aims to answer the following questions:

- What changes have occurred in the traditional barriers to brownfield redevelopment for residential uses over the last eight years?
- Which barriers have been partially or completely addressed, and how?
- Which barriers still exist, and why?
- What new barriers have emerged, either as a result of initiatives to address existing barriers, or changes to legislative, regulatory or financial frameworks?

Furthermore, the literature review attempts to identify the larger implications of brownfield redevelopment on transportation, housing supply and affordability, and sustainable approaches to urban planning and growth management, such as Smart Growth.

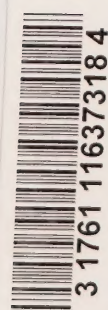
## METHODOLOGY

The focus was on Canadian literature on brownfields and brownfield redevelopment for housing that directly or indirectly addressed one or more barriers. Literature sources included books, professional and scientific journals, research reports, magazine articles, newsletters, presentations at conferences and seminars, media articles, information from several industry websites and personal correspondence with experts in the brownfield redevelopment industry. Canadian literature was selectively augmented through the review of key literature from the United States and United Kingdom.

Key informant interviews were conducted with 12 experts chosen from the brownfield redevelopment industry sectors (developers, property owners, support professionals and the public sector) and various regions across Canada. In addition to the research questions addressed by the literature review, the key informant questionnaire asked respondents to identify possible improvements that could facilitate brownfield redevelopment for residential uses.

## GENERAL FINDINGS

The literature review and key informant interviews found that brownfield redevelopment for housing shares the same traditional barriers as those experienced by brownfield redevelopment in general, such as liability, regulations, financing, technology, planning, stigma and others. However, with brownfield redevelopment for housing, the liability and regulatory barriers became more significant than the other obstacles because of the greater number of end land users, such as homeowners and renters exposed to potential risk. This translates into a larger amount of potential claimants, and potentially more expensive civil actions. The relationship between the barriers to brownfield redevelopment—especially for housing—must be better understood to properly evaluate the impact of current and proposed legislation, regulations, financial incentives, planning and other initiatives on these obstacles.





# BARRIERS AND ISSUES

## Liability

- a) Joint and several liability remains one of the key barriers to brownfield redevelopment for housing. The allocation by provinces of liability on a proportionate share basis holds promise as a tool to address joint and several liability.
- b) Strict interpretation of the “polluter pays” principle in recent landmark decisions by the courts has emerged as a recent obstacle. As well, the inability to transfer liability when land is sold has caused some large corporate landowners to mothball their properties.
- c) The introduction of a mechanism for the termination of regulatory and civil liability was suggested in the literature and by key informants, as a way to reduce civil liability as a barrier to brownfield redevelopment for housing.

## Regulations

- a) In several provinces progress has been achieved with respect to reforming the regulatory practices that act as barriers to brownfield redevelopment for housing, including:

- i) a commitment to review scientific criteria
- ii) use of a streamlined risk assessment process
- iii) the availability of direct regulator sign-off

These practices can potentially reduce the regulatory barriers to brownfield redevelopment for housing.

- b) The lack of better tools for risk assessment and assessing risk mitigation measures was noted as a barrier to brownfield redevelopment for housing.
- c) The lack of current best science in generic cleanup standards was noted as a barrier to brownfield redevelopment in some provinces. Suggested improvements to overcome this barrier include:
  - i) toxicological research to update current science
  - ii) a second set of residential use criteria for high densities where there is minimal opportunity for interaction between receptors and contaminants
- d) Despite a number of improvements in some provinces, the provincial regulators’ lack of acceptance of risk assessment and risk management approaches continues to represent a significant barrier to brownfield redevelopment for housing.
- e) Little progress has been made in reducing the lengthy timelines required for provincial ministries to review remediation plans and risk assessment/management reports.

- f) The literature and key informants suggested improvements for provincial regulators to help overcome the regulatory barriers to brownfield redevelopment for housing, including:

- i) streamlining the risk assessment process to focus more on the complex sites, and increase reliance on qualified professionals for risk assessment/management;
- ii) appropriate staffing and resources to provide expertise and timely review of risk-based approaches to site assessment and management (where required); and,
- iii) a shift in focus from “regulation” of brownfield sites to “facilitation” of brownfield redevelopment.

## Financial

- a) The reluctance of lenders to provide financing for brownfield redevelopment projects—especially residential projects—continues to be a barrier; however some progress has been made as a result of advances in financial risk management tools such as environmental insurance.
- b) Environmental insurance products have improved over the last five years. However, environmental insurance carriers still do not provide affordable coverage for cleanups of less than \$1 million—which represents most of the remediation projects in the market.
- c) Municipal financial incentives such as tax-increment financing, grants, loans and development charge credits have emerged as a catalyst to brownfield redevelopment for housing in several municipalities; in some municipalities these incentives are explicitly linked to residential development.
- d) The literature and key informants suggested improvements to help overcome the financial barriers to brownfield redevelopment for housing, including:
  - i) federal tax treatment to allow full expensing of remediation costs in the year(s) incurred;
  - ii) introduction of provincial funding programs that provide direct up-front funding for site assessment and environmental remediation, for example, Revi-Sols; and
  - iii) widespread use of financial incentives by municipalities across Canada.

## Technology

- a) Alternative remediation technologies have begun to slowly supplant dig and dump as the preferred approach to remediation in certain situations.
- b) One of the emerging barriers to the increased use and acceptance of alternative remediation technologies in Canada is the lack of available information on these technologies in plain, easy-to-understand language.

## Planning

- a) The following planning issues were identified as barriers to brownfield redevelopment for housing:
  - i) complexity and time required to obtain municipal planning approvals;
  - ii) municipal land use planning policies that are not supportive of brownfield redevelopment; and,
  - iii) the availability of an ample supply of greenfield land for residential development.
- b) The literature and key informants suggested improvements to help overcome the planning barriers to brownfield redevelopment for housing, including:
  - i) a clearer, more streamlined and facilitative planning approvals process;
  - ii) policies that provide incentives for brownfield redevelopment for housing, including pre-zoning, density bonusing and streamlined development permits;
  - iii) municipalities acting as facilitators and even partners in brownfield redevelopment projects for housing; and
  - iv) disincentives to greenfield residential development, such as restrictions on urban boundary expansions.

## Stigma, Education and Awareness

- a) Although improvements have been made, the lack of easily accessible and understood information on brownfield redevelopment is still a barrier to brownfield redevelopment for housing. In some cases, this can lead to brownfield sites being stigmatized.

- b) The literature and key informants suggested improvements to help overcome the stigma, education and awareness barriers to brownfield redevelopment for housing, including:
  - i) publicizing successful brownfield redevelopment projects in the media; and,
  - ii) public outreach programs designed to educate participants in the brownfield redevelopment process on the real risks and benefits of brownfield redevelopment.

## IMPLICATIONS OF BROWNFIELD REDEVELOPMENT FOR HOUSING SUPPLY AND SMART GROWTH

With an increased focus on sustainable development and restraining urban sprawl in Canada, brownfield redevelopment is receiving more attention as a potential tool to provide affordable housing within existing urban areas while reducing urban expansion.

Brownfield redevelopment projects can offer a broader range of housing types in an urban setting close to amenities and transportation. Brownfield redevelopment has also been shown to reduce transportation costs in comparison to greenfield development.

The remediation and redevelopment of brownfield sites for housing could allow Canadian communities to meet a number of sustainable development goals, including:

- meeting local housing needs
- preserving historic/locally significant structures
- protecting and improving human health
- encouraging economic development
- revitalizing existing neighbourhoods and stimulating the design of new and innovative neighbourhoods
- promoting stronger live-work relationships
- curbing urban sprawl

Based on the environmental, economic and social benefits of brownfield redevelopment, including brownfield redevelopment for housing, it is clear that brownfield redevelopment is the “epitome” of Smart Growth.



## CONCLUSION

In 2002, Angus Ross, Chair of the NRTEE's Brownfield Task Force, commented that the obstacles to brownfield redevelopment were the same as five years ago—liability, financing and public education issues. Although some progress has been made in most provinces on regulatory barriers, and progress has been achieved on financial barriers more generally, the situation today has not improved much from eight years ago.

Liability (civil and regulatory) and financial barriers are still the key impediments to brownfield redevelopment for housing. While the development and application of new and revised regulations in several provinces has helped in some cases to reduce regulatory liability exposure and create greater certainty around the finality of cleanups, these same regulations have built new barriers. The integration of the land use development approvals process with provincial environmental regulations and legislation has also created new obstacles. One of the key conclusions of this study is that the relationship between these barriers must be better understood in order to properly evaluate the impact of legislative, financial incentive and planning initiatives on overcoming these obstacles.

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### Housing Research at CMHC

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

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